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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/565,755

02/27/2006

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EXAMINER

NGUYEN, HUY TRAM

ART UNIT

PAPER NUMBER

1797

MAIL DATE

DELIVERY MODE

10/03/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/565,755	Applicant(s) AOGAKI ET AL.	
	Examiner HUY-TRAM NGUYEN	Art Unit 1797	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 February 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,2,5-13 is/are rejected.
- 7) ☒ Claim(s) 3,4 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 23 January 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>1/23/06, 3/9/06, and 9/22/06</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Drawings

1. Figures 11 and 12 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 8-13 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The claims 8-13 are not written in the form of method steps.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1, 2, and 5-7 are rejected under 35 U.S.C. 102(b) as being anticipated by **Dolan et al. (US Patent No. 6,136,182).**

Regarding Claim 1, Dolan et al. reference discloses a microreactor which comprises a liquid introduction zone (**Figure 12, numeral 230**), a microscopic liquid channel (**Figures 5A & 5B, numeral 20 and Figure 12, numeral 218**) and a liquid discharge zone (**Figure 12, numeral 232**), wherein the liquid channel is formed by a magnetic barrier by ferromagnetic track and is composed for liquid having magnetism introduced from the introduction zone to perform at least one kind of operation among chemical reaction, mixing, extraction and absorption in the liquid channel (**Abstract and Column 25, Lines 28-40 – mixing**).

Regarding Claim 2, Dolan et al. reference discloses the microreactor according to claim 1, wherein an external magnetic field is applied to the ferromagnetic track or the magnetism of the track is maintained of its own accord (**Figure 6 and Column 14, Lines 6-11**).

Regarding Claim 5, Dolan et al. reference discloses the microreactor according to claim 1, wherein a liquid discharge zone is expanded in the forward direction or branched to more than one zone (**Figure 12**).

Regarding Claim 6, Dolan et al. reference discloses the microreactor according to claim 1, wherein microscopic liquid channels are installed in plural and parallel, and is composed to perform the operation between liquids running in the channels (**Figures 5A & 5B**).

Regarding Claim 7, Dolan et al. reference discloses the microreactor according to claim 1, wherein the microscopic liquid channel is branched and is composed to introduce or to discharge liquid from the branched channel (**Figure 2, numerals 18a & 18b**).

6. Claims 8-9 are rejected under 35 U.S.C. 102(b) as being anticipated by **Young, Jr. et al. (US Patent No. 5,332,487)**

Regarding Claims 8 and 9, Young, Jr. et al. reference discloses a manufacturing method of a plated magnetic object (**Abstract**) including the electroless plating solution and electroplating solution using a permanent magnet positioned around the outside of the tank to provide an orienting magnetic field to the alloy to be electrodeposited.

7. Claim 11 is rejected under 35 U.S.C. 102(b) as being anticipated by **Kinoshita (US Patent No. 4,842,707)**

Regarding Claim 11, Kinoshita reference discloses manufacturing method of an etched object in a magnetic field to induce a magnetron discharge in the space above the material to be processed (**Abstract**).

8. Claim 13 is rejected under 35 U.S.C. 102(b) as being anticipated by **R.A. Shaffer et al. (US Patent No. 3,002,847)**

Regarding Claim 13, R.A. Shaffer et al. reference discloses the process for producing a fine mesh pattern of common magnetic substances containing iron on a substrate in a magnetic field (**Abstract**).

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Claim Rejections - 35 USC § 103

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

11. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

12. Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over **Young, Jr. et al. (US Patent No. 5,332,487)** in view of **Dolan et al. (US Patent No. 6,136,182)**

Regarding Claim 12, Young, Jr. et al reference discloses a method of plating an object according to claim 8 except for the object is a ferromagnetic track. Dolan et al. reference discloses this ferromagnetic material **(Abstract)**. It would have been obvious to one having ordinary skill in the art at the time the invention was made to use a ferromagnetic material for plating, since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. *In re Leshin*, 125 USPQ 416.

Allowable Subject Matter

13. Claims 3-4 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Regarding Claim 3, Dolan et al. reference discloses the microreactor according to claim 1 except for an outside of the liquid channel formed by the magnetic barrier is filled with surrounding fluid. There is no prior art to show this surrounding fluid.

Claim 4 is dependent claim of claim 3.

Regarding Claim 10, Young, Jr. et al. and Dolan et al. references disclose the manufacturing method of a plated object according to claim 8 except for an outside of the liquid channel formed by the magnetic barrier is filled with surrounding fluid. There is no prior art to show this surrounding fluid.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to HUY-TRAM NGUYEN whose telephone number is

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(571)270-3167. The examiner can normally be reached on MON- THURS: 6:30 AM - 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Walter Griffin can be reached on 571-272-1447. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

HTN
9/25/08

/Walter D. Griffin/
Supervisory Patent Examiner, Art Unit 1797